

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

1-2. (Canceled)

3. (Currently Amended) The PWB of ~~claim 2~~ claim 5, wherein said free space has a width D1 equal to twice the pitch D of said vias array less a via size, for accommodating m passive elements of a substantially similar width D1.

4. (Currently Amended) The PWB of ~~claim 2~~ claim 3, wherein m is at least one.

5. (Currently Amended) ~~The PWB of claim 2, A printed wiring board (PWB) for mounting a high performance integrated circuit, comprising:~~

on a top side of said PWB, a modified via array with BGA columns and BGA rows of ball connection pads;

a modified vias array of plated through hole (PTH) vias, with each via column Col(n) arranged between two respective BGA columns c(n) and c(n+1) and each via row R(k) arranged between two respective BGA rows r(k) and r(k-1), wherein 2m vias of said via column Col(i) placed in successive via rows R(i) to R(i+2m-1) of said

9 modified vias array are depopulated to obtain a free space on the back side of said
10 PWB, wherein $2m$ corresponding vias in a via column $Col(i+1)$ adjacent to said via
11 column $Col(i)$ and placed in said successive via rows $R(j)$ to $R(i+2m-1)$ of said vias
12 array are shared vias, wherein $n>1$, $k>2$, $2<i<n$ and $j<k$, and wherein a first shared
13 via in said via column $Col(i+1)$ and said via row $R(j)$ provides a power contact to a
14 first associated ball contact pad in said via column $c(i+1)$ and said via row $r(j)$ and to
15 a second associated ball contact pad in said via column $c(i+2)$ and said via row $r(j)$.

1 6. (Previously Presented) The PWB of claim 5, wherein a second shared via in
2 said via column $Col(i+1)$ and said via row $R(j+1)$ provides a ground contact to a
3 third associated ball contact pad in said via column $c(i+1)$ and said via row $r(j+1)$
4 and to a fourth associated ball contact pad in said via column $c(i+2)$ and said via
5 row $r(j)$.

1 7-10. (Canceled)

1 11. (Currently Amended) The PWB of claim 3, wherein said passive elements are
2 0603, 0402, 0201 or smaller decoupling capacitors.

1 12. (Currently Amended) The PWB of claim 3, wherein said passive elements are
2 0603, 0402, 0201 or smaller resistors.

1 13. (Canceled)

1 14. (New) The PWB of claim 11, wherein the capacitors have a size of
2 substantially 0.06" X 0.03".

1 15. (New) The PWB of claim 11, wherein the capacitors have a size of
2 substantially 0.04" X 0.02".

1 16. (New) The PWB of claim 11, wherein the capacitors have a size of
2 substantially 0.02" X 0.01".

1 17. (New) The PWB of claim 12, wherein the resistors have a size of substantially
2 0.06" X 0.03".

1 18. (New) The PWB of claim 12, wherein the resistors have a size of substantially
2 0.04" X 0.02".

1 19. (New) The PWB of claim 12, wherein the resistors have a size of substantially
2 0.02" X 0.01".